

Work Order ID 54311-2

December 7, 2009 3:08:45 PM



Page 1

Item ID: D3774-1

Accept



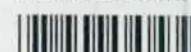
Setup Start



Revision ID:

Item Name: Seat Bottom, LH/RH

Stop



Start Date: 07/12/2009 Start Qty: 20.00

Required Date: 21/12/2009 Req'd Qty: 20.00

Reference:

Approvals:

Process Plan:

Date: 09-12-7

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3774

Rev B

100



HAND FINISHING THERMOFORMING

0.00

Thermoform

Memo

0.00

Thermoforming Machine

Set up machine program D3774-1 □ Set up clamping frame as per folio

~~10/01/08~~

110



HAND FINISHING THERMOFORMING

0.00

Thermoform

Memo

0.00

Thermoforming Machine

Cut Blanks

~~10/01/08~~
x11

Dr. 10/01/08

120



THERMOFORMING MACHINE

0.00

Thermoform

Memo

0.00

Thermoforming Machine

Thermoform as per Dwg. D3774-1 and Folio □ Dwg. Rev.

B. □ Folio Rev. A.

B

A

see w/o 55432 ~~10/01/08~~ x11

~~10/01/08~~

x11

Dr. 10/01/08

see w/o 55432 ~~10/01/08~~ x11

x11

Pro

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3774-1 PAR #: _____ Fault Category: Items Running NCR: Yes No DQA: [Signature] Date: 10/03/12
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: [Signature] Date: 10/03/31

NCR: <u>54311-2</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/11/19	# 120	During inspection from min it was found that the parts were cracking in the corners. 26 parts were formed to		- SCRAP + Destroy Qty x5 that have cracks SAP 10-01-17 - change T.H. Formis process. attach copy of new process.	<u>[Signature]</u> 10/04/19	<u>[Signature]</u> 10/02/18		<u>S</u> 10/01/19
		long in the mold and building up too much stress "Process"	<u>MP</u> QSI 042	- Anneal remaining parts that were not tested to break @ 285 deg F.	<u>[Signature]</u> 10/01/19 PART	<u>S</u>	<u>MP</u> QSI 042	<u>S</u> 10/01/19
				→ Qty x4 Buttons All Broken 10/01/19	<u>crack</u> <u>any pass</u> <u>S</u>			

NOTE: Date & initial all entries

Work Order ID 54311

December 7, 2009 3:08:45 PM



Page 2

Item ID: D3774-1

Accept



Setup Start



Revision ID:

Item Name: Seat Bottom, LH/RH

Stop



Start Date: 07/12/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 21/12/2009 Req'd Qty: 20.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

~~10/01/09~~
x11

10/01/12 x10
10/01/13 x5

140

HAND FINISHING THERMOFORMING

0.00



Thermoform

Memo

0.00

Thermoforming Machine

Trim to Finished Dimensions

★ SEE W/D
CHG, OVER

~~10/01/09~~
x11

10/01/13 x10
10/01/14

150

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo


0.00

Quality Control

1) Check dimensions to ensure conformity to drawing tolerances.

10/01/13 x4

P10 →

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
10-01-11	140	DRILL ϕ 0.750 T/P ZPL + PER MARKED-UP AUG ATTACHED				 10-01-11 JCR 09/04/12		

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/01/13	150	6 Parts Scrapped - Stressed Components Scrap + replace bad parts Anneal Remaining Parts @ 285 deg. F						

NOTE: Date & initial all entries

Work Order ID 54311

December 7, 2009 3:08:46 PM



Page 3

Item ID: D3774-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Seat Bottom, LH/RH

Start Date: 07/12/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 21/12/2009 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Stop



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

170

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

W 10.02.10

Picklist Print

December 7, 2009 3:08:50 PM

Page 1

Work Order ID: 54311



Parent Item: D3774-1



Parent Item Name: Seat Bottom, LH/RH



Start Date: 07/12/2009

Required Date: 21/12/2009

Comments:

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MLEXS.125-F60029-04		Purchased	No			110	sf	2,011.175	213.3400			
												
GE PLASTICS LEXAN SHEET												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
MAT	2011.175198	
103106	1.6765	
105330	47.8767	
109455	40.5717	
111710	329.893632	
112585	1591.15667	

x 2
x 7c
21.334 sf
270.6 sf
~~117.33~~
74.669 sf
10/01/08 wh
correct to 117.337 sf
10/01/12 wh

DART AEROSPACE LTD		Work Order:	54311
Description: Seat Bottom		Part Number:	D3774-1
Inspection Dwg: D3774	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: *W. Heger*

Date: 10/01/11

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.3	+/-0.100	1.3094				
33.9	+/-0.100	33.875"				
17.4	+/-0.100	17.54				
0.085	Min	0.088"				
0.100	Min	0.115"				
0.100	Min	0.111"				
0.100	Min	0.113"				
0.100	Min	0.110"				

Measured by: *W. Heger*

Date: 10/01/11

Audited by: *BP*

Date: 10/01/11

Prototype Approval:

Date:

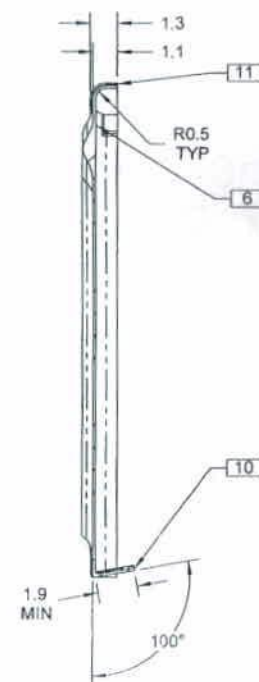
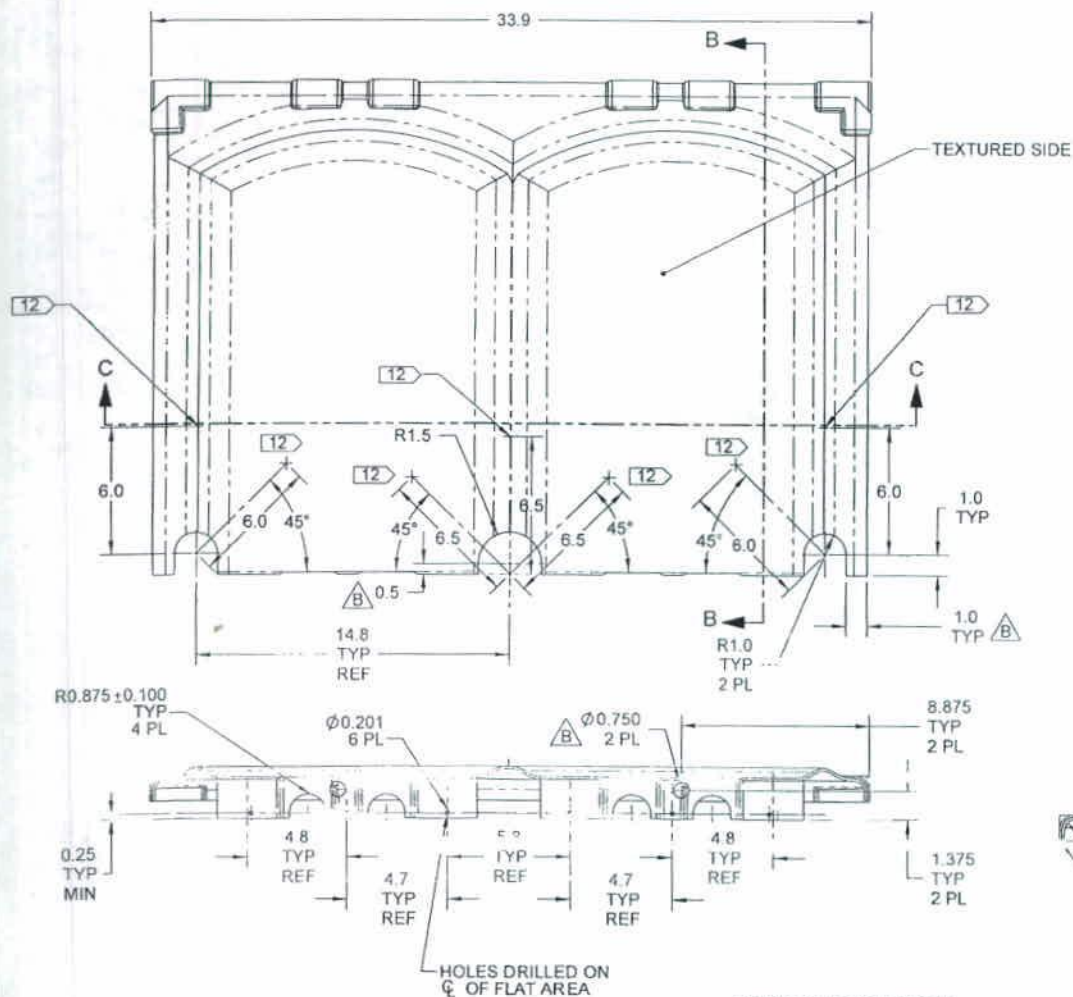
Rev	Date	Change	Revised by	Approved
A	08.09.04	New Issue	KJ/DL <i>AK</i>	<i>BP</i>



RELEASED
08-08-11/11

SEARCHED
INDEXED
SERIALIZED
FILED
APR 1964
FBI - MEMPHIS
54311
APR 09-12-74

B	UPDATE CUTOUT DIMENSIONS (ZN D4-2, D6-2, C4-3, C7-3); UPDATE MINIMUM THICKNESS (ZN A5-2, A5-3); ADD HOLES ON D3774-3 (ZN B6-3) REASON: MANUFACTURING CAPABILITIES	PH	08.07.25
A	NEW ISSUE	HS	08.06.23
REV.	DESCRIPTION	BY	DATE
DESIGN	HS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3774 TITLE SEAT DATE 08.07.25	
DRAWN	PH		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.25	REV. 1 OF 1	SHEET 1 OF 1



SECTION B-B



SECTION C-C

D3774-3 SEAT BACK

RELEASED
08-05-11

NOTES:
MATERIAL: F60029 GREY LEXAN SHEET (HEAVY HAIRCELL TEXTURE) 0.125" THICK TEXTURED SIDE UP (REF. DART SPEC MLEXS.125-F60029-04)
FINISH: NONE
TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
UNITS: INCHES UNLESS OTHERWISE NOTED
BREAK SHARP EDGES: 0.005 TO 0.010 MAX
IDENTIFICATION: IDENTIFY WITH DART P/N "D3774-3" USING VIBRATING STYLUS
WEIGHT: 4.82 lbs
PART TO BE PRODUCED FROM MOLD DT9023 AND PER DART QSI 022
OVERALL DIMENSIONS GIVEN ONLY FOR FURTHER INFORMATION REFER TO MOLD DT9023
MINIMUM MATERIAL THICKNESS AFTER FORMING ON BOTTOM FLANGE IS 0.065
MINIMUM MATERIAL THICKNESS AFTER FORMING FLANGES (WITHIN 2.0 FROM EDGES) IS 0.085
MINIMUM MATERIAL THICKNESS AFTER FORMING AT THESE POINTS IS 0.100

DESIGN	HS	DART AEROSPACE LTD	
DRAWN	PE	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3774	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SEAT	NTS
DATE	08.07.25	COPYRIGHT © 2008 BY DART AEROSPACE LTD	
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